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Research Paper

'Choice' of social media platform or encrypted messaging app to buy and sell illegal drugs

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ABSTRACT

Social media is increasingly being utilized to facilitate the buying and selling of illegal drugs, particularly by young people. However, the range of social media and messaging platforms means people must make 'choices' around which platforms they will use to conduct drug transactions. Polymedia theory suggests that people use different media to manage their social relationships, 'choosing' appropriate channels or platforms based on platform features and the social context of the relationship. This paper uses polymedia theory to explore how buyers and sellers navigate platform 'choice' for drug trading, and how this bears similarities to the ways in which they move between different platforms in their daily lives. We conducted anonymous online interviews with thirty-three people who buy and/or sell drugs via social media and encrypted messaging apps in New Zealand to explore the factors shaping their selection of platforms for drug transactions. Our findings highlight the importance of the relationship between the buyer and seller in shaping how interviewees weighted the relative importance of platform security and convenience. Though more commercial drug sellers exercised considerable influence in directing buyers of drugs towards a given platform, this pattern was less characteristic of how platform 'choice' was navigated in contexts of drug supply between friends. In social supply contexts, platform 'choices' were often not explicitly made, but rather exchanges were channelled through platforms already in use within the social group. We highlight the tensions that arise between seller preferences for a more secure platform and buyer preferences for greater convenience in contexts of friendship. Our findings highlight the importance of understanding social media drug market engagement as shaped by broader patterns of social media engagement, and the distinctions between different social contexts and personal relationships, consistent with polymedia theory.

Introduction

The use of social media platforms and encrypted messaging apps to buy and sell illegal drugs, particularly among younger age groups, has been the subject of significant media attention in recent years (e.g., Dillane, 2019; Ferguson, 2016; McCormick, 2021; Nichols, 2020). Academic study of this phenomenon remains in its early stages and is largely concentrated in the drug research field (Bakken & Demant, 2019; Barratt et al., 2021; Blankers et al., 2021; Demant et al., 2020; Demant et al., 2019; Moyle et al., 2019; Oksanen et al., 2021; van der Sanden et al., 2021; van der Sanden et al., 2022). The current research focus on drug transactions likely provides only a partial picture of how people navigate social media for drug trading.

Communications researchers have long suggested that different communications technologies fulfil different social functions (Baym et al., 2004). In the context of social media, different platforms enable distinct social functions by virtue of their unique features, design and functionalities (Phua et al., 2017; Waterloo et al., 2018). For example, Facebook has been widely linked to social networking (e.g., Ellison et al., 2007), Instagram to self-presentation (Alhabash & Ma, 2017), Snapchat to spontaneous interactions with close friends (Bayer et al., 2016), and Whatsapp to regular, more personal communication with friends and family (Matassi et al., 2019; Swart et al., 2018). Indeed, research has shown that different platforms tend to meet different social needs and are associated with different relational contexts, ranging from distant, 'weak ties', strangers, to more intimate circles of close friends (Karapanos et al., 2016; Phua et al., 2017; Quan-Haase & Young, 2010; Vaterlaus et al., 2016). Increasingly platform diversity is paralleled by an overlapping platform functionalities. As a result, people need to make 'choices'[1] around which platforms they will use for which purposes,

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[1] We use the term 'choice' in scare quotes throughout this paper to account for the extent to which individual preferences and risk perceptions are likely to influence which platforms are used for drug transactions. However, we acknowledge that individuals do not always make explicit 'choices' to use specific social media platforms. Additionally, people may gradually 'drift' into involvement in drug selling rather than actively 'choosing' to commence these behaviors.

given they are presented with many different options hosting similar features (Boczkowski et al., 2018; Madianou & Miller, 2012b; Tandoc et al., 2019).

Several communications theories consider how people 'choose' between different social media platforms on an individual basis. For example, uses and gratifications theory (U&G) suggests that people play an active role in deciding how to use different media by selecting platforms that meet specific needs – or gratifications (Alencar et al., 2019; Gruzd et al., 2018; Quan-Haase & Young, 2010). Alternatively, the concept of affordances suggests that platform functionalities constrain their possibilities of use, thereby pushing people to use them to perform specific actions (Davis & Chouinard, 2017; Evans et al., 2017; Hutchby, 2001). However, many people use different platforms as vehicles for their social relationships (Madianou & Miller, 2012a). The social context surrounding the use of different platforms can have a powerful influence on how people 'choose' between them and how different features are prioritised. Drug markets have long been suggested by researchers to be comprised largely of different social relations (e.g., Dwyer & Moore, 2010). As such, the process of 'choosing' a platform for drug trading may need to be navigated as part of the relational context in which drug transactions take place.

In this vein, polymedia theory suggests that diversity and convergence (Jenkins, 2006) in the social media landscape leads people to structure their platform use around distinct social and relational contexts rather than on platform functionality alone (Madianou, 2014, 2016; Madianou & Miller, 2012, 2012a,b). In an environment characterized by widespread media literacy, and easy access to diverse communication mediums at low-cost, people tend to perceive media as one complete environment of affordances they can use to manage different relationships (Madianou & Miller, 2012, 2012a,b). Polymedia draws on affordance theory (Hutchby, 2001), arguing that platform functionalities and features provide the means through which people compare and distinguish between them, making decisions around which platform is appropriate in a particular social context or relationship. The process of 'choosing' an appropriate medium is twofold. Firstly, the affordances of the platform must suit the communicative needs of the relationship, and secondly, the platform itself sends an 'appropriate' message about the *nature* of that relationship (Madianou, 2016; Peng, 2016). According to polymedia, platform 'choice' is a two-way street, where one person's 'choice' of platform may not be accepted as "appropriate" for the social context at hand by their interaction partner, or social group (See also, Gershon, 2010). As such, power dynamics between interaction partners will tend to influence how different mediums are used within the context of a particular relationship. A factor which can lead to tensions between different platform preferences (Madianou & Miller, 2012a).

The negotiation of power as part of platform 'choice' in polymedia contexts may constrain the ways in which people are able to manage their relationships using 'choice' of platform. Within the context of this study, we argue that using social media for drug trading means that buyers and sellers must position drug trading behaviors within their personal and local polymedia environments. In particular, we consider how social pressure to use platforms that are dominant or the social media 'default' within one's country, region, city or social group (Ling, 2017) may impact on the ways in which people are able to enforce their 'choice' of platform for drug trading. Messaging apps such as Whatsapp in much of Europe, Latin America and Africa, or Messenger in the US, Canada, Australia and New Zealand (We Are Social, 2022b; Winik, 2021) are deeply embedded in everyday life to the point where their use is 'taken for granted' (Ling, 2012; Matassi et al., 2019). Ling (2016) describes the social pressure to make use of communications technologies such as the mobile phone and texting as 'soft coercion' (See also, Ling & Lai, 2016), whereby individuals' risk social consequences such as exclusion if they 'choose' to inconvenience others by not being accessible via commonly used social media channels. Hence, individuals may make 'choices' around which platforms they use, and what they use them for, but these 'choices' remain constrained by the wider environment of local and group norms around social media use (Ling, 2017).

This paper applies polymedia theory to understand social media drug markets, exploring how people who buy or sell drugs via social media in New Zealand make 'choices' around the platforms they use for drug trading.

Social media drug markets and relationship between buyer and seller

A range of different social media platforms have been linked to drug trading, ranging from 'mainstream' platforms such as Facebook, Instagram, Snapchat and Whatsapp (Bakken, 2020; Bakken & Demant, 2019; Demant et al., 2019; Moyle et al., 2019) to lesser-known platforms such as Discord (van der Sanden et al., 2022) and encrypted messaging apps such as Telegram (Barratt et al., 2021; Blankers et al., 2021).

Different social media platforms tend to facilitate different drug market structures based on how they facilitate access to new buyers and sellers or protect traders from exposure to law enforcement and prosecution (Bakken & Demant, 2019). Platforms that enable social networking between strangers, such as Tinder, Grindr, Instagram, Facebook and Discord, allow sellers to openly 'advertise' their products to unknown buyers by constructing a public profile, or advertising to other members of Facebook drug selling groups (Bakken, 2020) or Discord drug servers (van der Sanden et al., 2022). This type of drug market dynamic has been described as 'open' or 'public' by drug researchers (e.g., Hough & Natarajan, 2000; Sandberg, 2012), indicating drug markets that are highly visible and accessible, offering sellers little security from law enforcement. Drug transactions in 'open' drug markets tend to take place between strangers (Eck, 1995; May & Hough, 2004). Conversely, messaging platforms, both encrypted and unencrypted, facilitate more private drug transactions between people who likely already know one another, via direct message or within the confines of a group chat (Bakken & Demant, 2019). Drug researchers describe this type of drug market as 'closed' (e.g., Hough & Natarajan, 2000), with drug transactions taking place in a discreet location, and sellers only transacting with trusted buyers, or vice versa (May & Hough, 2004).

Though there has been some contextualization of the use of messaging platforms to facilitate trades between people who already know one another (Bakken & Demant, 2019; Demant et al., 2019), the majority of current findings apply to commercial drug markets involving transactional buyer/seller relationships with a high level of profit motive for sellers. Indeed, Moeller (2022) has suggested social media drug markets may be more market-driven than network-driven. As a result, there remains considerable scope to consider how social media may be facilitating less commercial drug trades (e.g., between friends, or within social networks). For example, 'social supply' behaviors are also increasingly likely to be channeled through social media platforms. Social supply refers to small-scale drug selling carried out between friends or social contacts, often with the intention to recoup the costs of the seller's own drug consumption or to earn a modest profit (e.g., Coomber & Moyle, 2014; Potter, 2009). The role of social networks in social supply contexts often mediates individual perceptions of what counts as 'dealing' drugs, facilitating a gradual shift – a 'drift' – from drug consumption into drug selling behaviors (Bright & Sutherland, 2017; Goldsmith & Brewer, 2015; Jacinto et al., 2008; Taylor & Potter, 2013). However, researchers are yet to examine how social supply behaviors are facilitated via social media.

These differing types of drug selling are not mutually exclusive on social media. Sellers may move between different platforms at different points during a transaction or commercial relationship (Bakken & Demant, 2019). For example, a seller may advertise to new buyers on Instagram, but direct them to an encrypted messaging app such as Wickr to arrange a transaction. Prior research on social media drug markets has argued that this environment presents sellers with considerable control over how they are approached by buyers, effectively allowing them to 'choose' and combine different platform features based on their own

needs for accessibility or security (Bakken & Demant, 2019). However, focusing exclusively on seller risk perceptions and security needs as the principal drivers of platform 'choice' in social media drug markets may overlook the broader ways in which people structure their relationships on social media (Madianou & Miller, 2012a).

Social media use and social media drug trading in New Zealand

Rates of social media use in New Zealand are high, with just over 89% of the population making use of social media as of January 2022, compared to 81% in the US and 33% in India (We Are Social, 2022b). As of February 2022, 81% of New Zealanders with internet access use Facebook, making it New Zealand's most popular social media platform, followed by Facebook Messenger (75%), Instagram (58%), Whatsapp (40%) and Snapchat (37%) (We Are Social, 2022a). A recent online survey of New Zealanders who use drugs found 22% of respondents had purchased drugs via social media in the past six months, of which 60% had done so via Facebook/Messenger, followed by 48% via Snapchat and 20% via Instagram (van der Sanden et al., 2021). Encrypted messaging apps were less widely used among respondents, with only 9% having used Wickr and 2% having used Telegram. The cited advantages of using social media to buy drugs were greater convenience (74%), faster transaction speed or delivery (43%) and ease of use in comparison to the darkweb (41%) when purchasing drugs in this way (Moyle et al., 2019; van der Sanden et al., 2021).

The aim of this paper is to explore how the process of 'choosing' a platform for drug trading in *social supply settings* may differ from more commercial market contexts and whether this reflects factors which also shape people's day-to-day engagement with social media.

Methods

This paper presents data gathered from anonymous qualitative online interviews with people who have experiences using social media to buy and/or sell drugs, as part of a broader project examining social media drug markets in New Zealand (See also, van der Sanden et al., 2021; van der Sanden et al., 2022). Online chat interviews (Bakken, 2022; Barratt, 2012; Gibson, 2020) with 33 participants were carried out from July 2020 to September 2021. A semi-structured interview approach was chosen to facilitate adaptability across a wide range of different drug market roles (i.e., buyer/seller) and patterns of social media platform use, and to allow for greater flexibility in responding to novel issues and experiences raised by participants (Brinkmann & Kvale, 2015). The initial interview schedule was developed based on a comprehensive literature review and the results of an earlier large-scale quantitative survey of people who purchase drugs via social media in New Zealand (van der Sanden et al., 2021). The interview schedule included topics such as how and why participants used specific platforms to purchase or sell drugs, perspectives on physical safety and drug quality when using social media drug markets, and patterns of social media use more generally.

Given the nature of the research topic, the potential difficulty of recruiting participants from a hard-to-reach population, and to encourage open disclosure by interviewees, interviews were carried out via the anonymous encrypted chat app Wickr me (referred to as Wickr throughout this paper) (Mayr & Weller, 2016; Stieger & Göritz, 2006). It was assumed participants would feel safer, and more comfortable sharing their experiences anonymously via direct messaging (Barratt, 2012; Kazmer & Xie, 2008). Additionally, we anticipated that many interviewees would likely be younger in age (e.g., <25) and for many in this age group communication via messaging is often perceived as more 'relaxed' than in-person conversation or phone-calls with strangers (Bakken, 2022; Gibson, 2020). Wickr was chosen due to its security features. The app offers users end-to-end encrypted messaging, does not require users to enter a phone number to sign up, and message-timers are automatically applied to messages ensuring chat content is deleted after a short period of time. Wickr has been used in previous research with social media drug sellers internationally (Demant et al., 2019), as well as by surface web cannabis sellers and buyers (Childs et al., 2021).

Participants were recruited using a targeted sampling approach (Watters & Biernacki, 1989) via multiple online social media channels and through distributing fliers physically at a dance music festival. The study was advertised on both reddit and Facebook. The lead researcher approached the administrators of subreddits specific to New Zealand and Facebook groups related to drugs such as cannabis or psychedelics, as well as dance music genres often associated with specific types of drug use (Forsyth et al., 1997) for permission to post the study advert. Hard copy adverts for the study were also physically distributed at a dance music festival in Auckland, and the advert was posted to various social media channels (Facebook, Instagram and Twitter) via the New Zealand drug checking service *Know Your Stuff*. Prospective participants needed to be aged over 16 to participate in the study and have some experience using social media to buy and/or sell illegal drugs in New Zealand.

Interviews were completed online over several hours, or in some cases over several days (due to breaks between ongoing messages), with the longest interview duration being five days (See also, Bakken, 2022). The interviewer used Wickr's desktop application to both carry out the interviews and to transcribe them by copy-pasting chat messages directly into a word document and formatting them effective immediately to remove participant usernames or identifying details. Participants were offered a supermarket voucher as reimbursement for their time. In total, 33 people were interviewed for this project, 11 of whom also took part in a follow-up interview (also via Wickr) approximately six months after their initial interview. Follow-up interviews were carried out to further develop the research team's understanding of social media drug markets by providing an opportunity to clarify interpretations of existing data, as well as ask questions on topics that had emerged from interviews with other participants in the meantime. Additionally, in the period between initial and follow up interviews, some interviewees changed their patterns of social media drug trading by either changing their market roles or switching to use alternative platforms. These changes provided valuable examples of platform 'choice', which helped inform data analysis.

Data were analyzed thematically in NVivo using Braun and Clarke's Six-Step Thematic Analysis framework (Braun & Clarke, 2006, 2014, Braun & Clarke, 2022). Initial coding structures were developed based on a comprehensive literature review and findings generated from online interviews. As data collection and analysis progressed, coding structures were further developed and refined. Initial analysis involved reading, and coding interviews by hand based on descriptive data such as app types used for drugs, drug supply connections and seller types, perceived risk and negative experiences, as well as topics such as online privacy and references to recreational drug use, drug quality and price. Memos were maintained for each 'code group', detailing developments in thinking and noting those interviewee experiences that were particularly important to the essence of the codes within the group. Concept- and mind maps were used to clarify relationships between codes, code groups and themes in preparation for the write-up of findings. The research team has opted to retain original language used by participants in the interview excerpts presented below. In cases where slang terms are clarified, this is inserted into the excerpt in non-italicized parentheses.

This research received ethics approval from Massey University Human Ethics Committee Southern A (application code: SOA 20/22).

Findings

Contextualization of interview sample

The majority of participants had used social media to buy drugs (n=20), while the remainder (n=13) had both bought and sold drugs to differing extents. The median age of the sample was 24 (IQR=19.5-26), with the youngest interviewee aged 16 and the oldest 39 years.

Table 1
Aggregate numbers for platforms used by participants to buy/sell drugs, and platforms they used for 'everyday', non-drug related purposes. Platforms are ordered based on the frequency with which participants used them to buy/sell drugs.

Platform	Number of participants who used this platform to buy and/or sell drugs (N=33)	Number of participants who used platform for non-drug related purposes (N=33) (e.g., keeping in touch with friends and family, news, dating, etc.)
Facebook Messenger	17	31
Snapchat	17	22
Wickr	16	0
Discord	12	18
Instagram*	5	28
Signal	5	2
Telegram	4	3
Facebook**	3	27
Reddit	2	13
Kik	1	0
Tumblr	1	3
Whatsapp	1	8
Tinder/Grindr	1	3
Twitter	0	3
TikTok	0	1
Median number of platforms used = 2 (range 1-5)		

* The five participants who used Instagram for drug trading all used Instagram Messenger to buy drugs from friends or social connections.

** Participants who purchased drugs from the Facebook platform used either selling groups or seller Facebook pages. These participants are also included in the aggregate number under the use of Facebook Messenger for drug trading as they all used Messenger as part of their engagement with either the selling groups or seller pages.

Ten interviewees identified as female, 12 male, and one gender neutral. Twenty-three participants were located in New Zealand's North Island (By region: 10=Auckland – New Zealand's largest city and most populous region; 10=Wellington – New Zealand's capital and third largest city), and ten in the South Island (By region: 5=Otago, 3=Canterbury, 2=Southland).

Table 1 presents the platforms used by participants for buying and/or selling drugs, and for non-drug related purposes. Messenger (n=17) and Snapchat (n=17) were most often used for drug trading by participants, followed by Wickr (n=16), and Discord (n=12). The median number of platforms used for drug trading purposes among participants was 2, with the fewest being 1 and the most being 5 different platforms. Messenger (n=31), Instagram (n=28) and Facebook (n=27) were most often used for non-drug related purposes (see supplementary material for detailed breakdown of interviewee drug and non-drug related platform use).

Factors influencing app 'choice' among buyers and sellers

From a polymedia perspective, comparisons between platform affordances, or features underpin the linking of platform to social context (Madianou & Miller, 2012b). In the context of our interview sample participants differentiated between platforms based on two dimensions: security and convenience. Fig. 1 presents the different platforms based on interviewees perceptions of these two dimensions, that is, their understanding of the effectiveness of the security features of platforms, and the perceived convenience of using the platform (which may reflect the platforms proximity or place within interviewee's 'everyday' social media repertoires). The relative positioning of the platforms is discussed in detail in the sections below.

1 *Security*

Platform security concerned whether the platform in question had in-built features such as self-deleting data or messages, and end-to-end encryption that participants could make use for drug trading. Participants tended to rank platform security in terms of how many security features they *thought* a particular platform had, which then provided a baseline indication of what type of drug market context warranted the use of that platform (Madianou & Miller, 2012a). For example, an encrypted messaging app such as Wickr was considered 'very high security' because it incorporated three security features: end-to-end encryption, message-timers, and username-based sign up, thus avoiding the need to link one's account to a phone number (see Fig. 1). The messaging apps Signal and Telegram were also perceived as high security, but both platforms require sign up with a phone number, which some participants felt was less secure. Telegram chats are also not end-to-end encrypted by default – a feature which only one interviewee was aware of. Snapchat offered users 'some security' by virtue of username-based sign up and self-deleting messages, while Discord offered users pseudonymity but no other platform security features. Messenger offered users 'no security' (unless using the 'secret chats' feature) because messages had to be

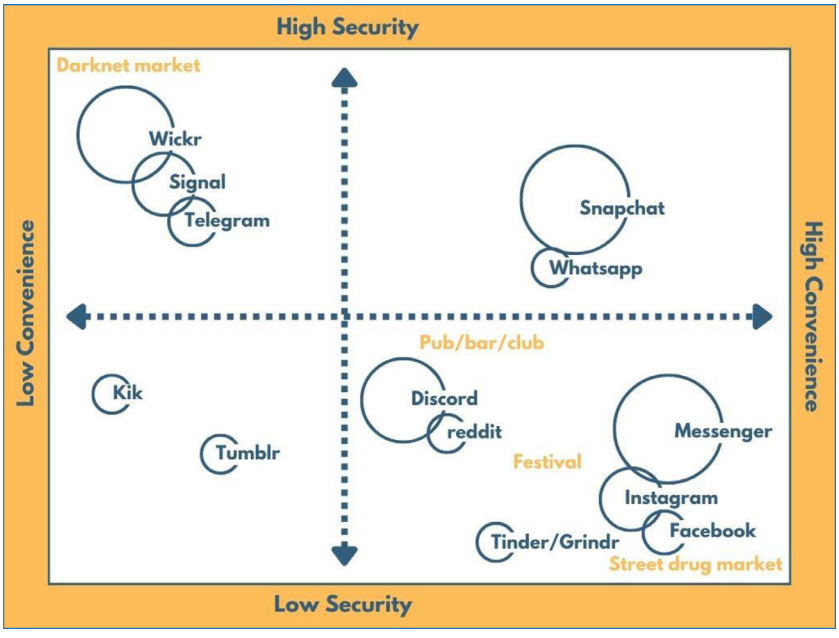

Fig. 1. Platforms used for drug trading (Table 1) positioned based on participant perceptions of their level of security (how many security features a platform is viewed as having) and their level of convenience (rates of platform use among participant social networks, familiarity with the platform, perceptions of technical complexity). The larger the circle associated with each platform the higher the number of participants who used that platform for drug trading. Approximate positions of other types of retail drug market have been included for comparison.

manually deleted, were not end-to-end-encrypted and use of the platform was linked to an individual's offline identity.

As a result, participants often used different platforms to meet the security needs of different buying and selling contexts. Transaction risks such as drug type, the amount bought or sold, and the level of drug market involvement of one or both parties often encouraged the use of platforms with multiple security features:

> *My friend and I were importing a lot of stuff so *we* communicated via wickr and sort of sold to close friends who then delegated out? (**P12**, Gender neutral, 25, seller)*

> *Not all my dealers use wickr only the ones that supply A class (drugs). And B class too. But Facebook or Snapchat will work just fine for those things too. (**P8**, M23, buyer/seller)*

2 *Convenience*

Conversely, the extent to which a given platform was viewed as 'convenient' for drug trading reflected its wider use in the population and in interviewees' social networks:

> *I didn't exactly start looking on social media, it was more just there. It's what everyone uses. Wickr was the only app I downloaded specifically for drug purchasing (**P3**, M21, buyer/seller)*

This excerpt underscores what was a common point of contrast between more general 'social media' (i.e., Facebook, Messenger, Instagram, Whatsapp, and Snapchat) and encrypted messaging apps. Social media platforms were already an integral part of interviewees' daily lives (Ling, 2012; Matassi et al., 2019), while encrypted messaging apps were often not familiar to interviewees and needed to be downloaded specifically for buying and selling drugs. As shown in Table 1, while some interviewees did make use of Telegram and Signal to chat with friends or for other non-drug related purposes, Wickr was exclusively linked to drug trading. Additionally, Telegram and Signal have increased in popularity in recent years (O'Flaherty, 2021; Statista, 2022) and at the time of writing are more regularly downloaded from the New Zealand Apple App Store than Wickr (Similarweb, 2022).

2 *Trade-offs between security and convenience*

The previous sections show how participants tended to contrast platforms both *within* parameters of security and convenience, but they also weighted these variables against one another. Taken together, a platform which was 'high security' – such as an encrypted messaging app – was then almost always 'low convenience', while 'high convenience' platforms, such as Messenger were by and large viewed as 'low security' (Fig. 1). How security and convenience were weighted among interviewees tended to depend on their relationship to the buyer or seller, and their own market role. For example, some sellers and buyers – particularly those who were younger and involved in trading smaller amounts of drugs such as cannabis – indicated they saw the low convenience of encrypted apps, and their more 'niche' place in the social media ecosystem, as barriers to adopting them for drug trading purposes:

> *Fuck all people use wickr hahaha. Everyone has snapchat (**P29**, M19, buyer/seller)*

> *I feel safer on Snapchat funnily enough because I use the app more often. I don't fully understand wickr (**P28**, F22, buyer)*

In line with these examples, some participants referenced Snapchat as a useful 'middle ground' that balanced the convenience of Messenger with a level of security that was "sufficient" for most small-scale drug trades:

> *(Snapchat) is pretty much perfect… It's more anonymous that texting, and everyone already has an account so you only need to add a dealer instead of if you used something like wickr, where you have to make a whole new account (**P22**, M16, Buyer)*

Commercial drug markets: Facebook, discord and encrypted messaging apps

The more commercial drug market environments tended to be characterized by a lower degree of familiarity between buyer and seller, often making platform 'choice' more streamlined for both parties. However, the way this streamlining effect took shape was largely dependent on whether the social media drug market in question was 'open' or 'closed' (May & Hough, 2004).

1 *Selling groups*

Interviewees taking part in more 'open' selling groups on Facebook (or Messenger), and on 'lower tier' Discord drug servers (van der Sanden et al., 2022) tended to place emphasis on the overall convenience of these drug trading environments. This type of social media drug market offered interviewees access to a range of products, sellers, and buyers, and often included quick local drop off or delivery (Moyle et al., 2019). The predominance of drug trading between strangers in this context appeared to elevate the importance of platform convenience as a means of facilitating connections between people who were otherwise not socially linked. In this case, platform 'choice' was made by buyers *and* sellers *independently* prior to connecting with one another via a selling group. As a result, the process of initial platform 'choice' in selling group environments was more reflective of individual media 'choice' theories such as U&G (Quan-Haase & Young, 2010). Interviewees tended to contrast their use of selling groups against their use of other platforms linked more closely to drug access via network ties, as illustrated in the quote below:

> ***P29**: Discord is more of a failsafe if no one is buying. Since there's so many people on the servers there's always someone who wants to buy*

> ***Interviewer:** So it's like options and loads of buyers on Discord versus security and safety on snapchat?*

> ***P29:** Yeah exactly. That made it sound smart (M19, buyer/seller)*

In this case, the interviewee used both Snapchat and Discord drug servers to sell drugs, but he contrasted between them as each meeting different selling needs or having different gratifications – in line with U&G theory (Quan-Haase & Young, 2010). However, the concentration of selling groups on low security platforms in our sample (see Fig. 1) could also be viewed as negating platform 'choice', by pushing buyers and sellers to "follow the market" (Moeller, 2022), irrespective of individual platform preferences. Hence, though interviewees were free to 'choose' whether they used Facebook, Messenger or Discord to access selling groups along individual parameters, they had little control over the platform the group was based on (Ling, 2017).

1 *Encrypted messaging apps*

In our sample the use of an encrypted app tended to underscore a shift from social supply to participation in a more commercial drug market. Interviewees almost always moved to using encrypted messaging apps after getting a seller's contact details from a friend, who acted as a trusted go-between through which the seller could vet the prospective buyer and vice versa (See also, Bakken & Demant, 2019). This existing network link between buyer and seller often meant that the use of encrypted messaging apps was typically associated with more distant 'weak tie' social contexts (Haythornthwaite, 2005), and the seller was often clearly framed as a 'dealer':

> *Friends offering usernames of dealers they had gotten drugs off. So I got the app and usernames of recommended dealers and used it from there (**P17**, F26, buyer)*

As illustrated in the above excerpt, the seller contact dictated what platform the buyer downloaded for drug trading. Platform 'choice' was dominated by seller preferences, and the use of a high security, low convenience platform such as an encrypted messaging app was respected by

buyers, who understood they had to approach sellers via the 'correct' communications channel to make purchases:

*Most (sellers) will happily talk on their chosen platform about anything. But the ones who like the encrypted apps won't talk at all on others (**P20**, M25, buyer/seller)*

*With my main dealer my only communication is Wickr (**P4**, F23, buyer)*

The drug market context associated with encrypted messaging apps, and the fact that their use was often specifically associated with buying or selling drugs meant that for buyers, a particular platform could become *linked* to a specific drug contact, and by default also a specific drug market context:

*… if you just want some for a festival you'll probably just ask a mate - but if you want them more frequently then you're gonna need to find a reliable dealer and app. (**P19**, F26, buyer)*

The clear boundaries around seller preferences that characterized the experiences of interviewees using encrypted messaging platforms highlight how platform 'choice' is simplified in situations of low familiarity between buying and selling parties. The commercial drug market context can be viewed as "demanding" the use of a high security platform, which few buyers are likely willing to question (Madianou & Miller, 2012b). But perhaps most importantly, buyer and seller also typically lack an existing shared polymedia repertoire given their 'weak tie' relationship (Haythornthwaite, 2005; Madianou & Miller, 2012b). The latter factor helps to explain the discrepancy between streamlined platform 'choice' in commercial drug market contexts and what could be the challenges to navigating this issue in contexts of social supply.

Social supply: Messenger and Snapchat

Among interviewees the use of platforms like Messenger and Snapchat was most often associated with social supply drug transactions. As the excerpts below illustrate, buying from friends using a platform like Messenger was often not really viewed as "buying drugs off social media":

*I guess I would say that I have bought from friends via Facebook messenger, but I don't really count that as social media because it's just instead of talking irl (in real life) or texting (**P13**, F24, buyer)*

*I don't use Facebook to find drugs. I have friends on Facebook that I message via Facebook for certain drugs or if someone isn't replying (**P8**, M23, buyer/seller)*

The primacy of the relationship between buyer and seller in this instance meant the platforms used for drugs weren't so much 'chosen' as "taken for granted" (Ling, 2012). Platforms like Messenger were already in use and embedded in interviewees' everyday communications with their friends, and across their wider social networks. As a result of their social dominance (Ling, 2017; Matassi et al., 2019) these platforms can quickly become channels for drug trading.

Using Messenger was part of what could be an extensive existing polymedia repertoire shared between buyer and seller (Madianou & Miller, 2012b). This helps to explain why participants tended to blur together different communications mediums such as texting, messaging and even talking when referencing buying from or selling to friends (Baym, 2015):

*Social media Vs txt for me is kind of just the same medium really, message to my phone (**P11**, M32, buyer)*

The small-scale nature of most social supply transactions (Coomber & Turnbull, 2007), and high levels of normalization around recreational drug use are important factors underpinning perceptions of social supply as 'low risk' (Coomber et al., 2016). A low-risk drug market context coupled with the reciprocity characteristic of friendship contexts in general meant that if sellers wanted to use a more secure platform, their preferences had to compete more strongly with high convenience, social 'default' platforms already in use within their social circles:

*I would've much rather used an app that offers end to end encryption whilst I was selling but no one wants to download another app (**P32**, M19, buyer/seller)*

In this context, shifting friends onto encrypted messaging apps specifically for drug trades could be more difficult given their low convenience and association with more 'serious' drug market contexts. As such, sellers could adopt a 'middle ground' platform that balanced security with convenience, such as Snapchat:

*Just that it's asking people to add an extra app that they wouldn't otherwise use, friends would just think it's a bit paranoid/too annoying to ask for a small amount of drugs… Snapchat is pretty safe as the messages aren't saved. So, I don't think it's worth being a pain to use Wickr (**P27**, M23, seller)*

The above excerpt illustrates how navigating platform 'choice' in social supply contexts could mean navigating tensions between seller security needs and buyer desires for convenience. Making use of more accessible 'mainstream' platforms for drugs was not, per se, experienced as problematic among interviewees who sold to friends, and buyers and sellers often used 'code' to talk about drugs on platform such as Messenger (See also, Bakken & Demant, 2019; Demant et al., 2019). However, it highlights an element of vulnerability sellers might need to navigate as part of their involvement in social supply, where they could be at greater risk of exposure to police, if buyers approached them via the 'wrong' social media channels (Gershon, 2010):

*I do worry about privacy and security, especially as I fairly often get friends asking about things on clear text messenger, though I always reply in the secret chat. (**P9**, M29, buyer/seller)*

Movement between apps for buying and selling drugs

The linking of different platforms with different drug market contexts helps to explain why using multiple platforms for drug trading was commonplace among interviewees (see Table 1). Many interviewees combined the use of a more 'serious', high security encrypted messaging app for commercial transactions with 'everyday' social media channels in the context of social supply. In this manner, interviewees effectively used different social media and messaging platforms to manage their drug market relationships akin to polymedia theory (Madianou & Miller, 2012a):

*Dealers I tend to have on Wickr but I use messenger and Snapchat as well especially if it's close friends (**P4**, F23, buyer)*

Some sellers highlighted a similar pattern, where encrypted messaging apps were used in contexts of higher transaction risk, or vis a vis another seller or grower, while buyers could use a variety of more convenient channels to get in touch:

*Well just which ever platform they speak to me first is how I leave it. Unless it's text or calling I tell them to add me on snap. Telegram for the grower because it's higher risk and I would be picking up 10-15-20ozs (of cannabis) at a time so extra caution is used (**P24**, M31, buyer/seller)*

However, individual polymedia repertoires and the place of drug trading within them were variable (Madianou & Miller, 2012a). Seller preferences for greater security, and buyer preferences for greater convenience were not set in stone. For example, some buyers discussed drugs strictly on encrypted messaging platforms, even with their friends:

*If someone messages me about drugs on FB (Facebook) or IG (Instagram) I immediately tell them to message me on Wickr. Sometimes people message me like "do you have x" and I'll say go to Wickr. I never message anyone about stuff outside of Wickr. But occasionally people will message me and I'll direct them here (**P19**, F26, buyer)*

*Some idiots try talk to me on messenger but I'll tell them to download wickr. I've gotten most of my mates who talk drugs onto it (**P25**, M27, buyer)*

In the above cases individual risk perceptions and platform security are viewed as more important than group norms around communication via social media channels (Ling & Lai, 2016). These examples highlight how group norms around social media use – even those involving socially embedded platforms like Messenger can be modified to accommodate specific behaviours such as drug trading.

Lastly, as part of managing their engagement with different drug market contexts on social media, some interviewees appeared to actively avoid downloading or using platforms associated with more 'serious' or 'risky' drug market settings. In these instances, buyers appeared to understand that certain platforms were associated with certain types of sellers and used this knowledge to shape their own interactions with their local drug market:

*To be honest if I didn't have those contacts (on Messenger) I would have probably still used drugs but I would have asked someone else to source instead of me going to download wickr etc and source. You always know someone who knows someone who will be able to source (**P16**, F26, buyer)*

The interviewee in the above excerpt expresses an understanding of Wickr as associated with less familiar, more commercial and 'high stakes' drug purchasing. For this reason, she made a point of sticking to Messenger for drug purchasing. Commercial sellers were most likely unwilling to use Messenger, but she could easily contact friends and acquaintances using this platform. This meant she was able to continue buying from social connections and could avoid having to engage with what she considered a "dodgier" part of her local drug market.

Discussion

Previous research suggests that social media affords drug sellers a greater level of control over how they interact with their local drug market, allowing them to locate themselves on a platform of their 'choice' (Bakken & Demant, 2019; Demant & Bakken, 2019). Bakken and Demant (2019) argue this may mean social media drug markets are less heavily influenced by buyer demands and preferences, as buyers are required to meet a seller in their 'chosen' location. While our findings confirm this can be the case, we suggest this type of platform 'choice' process tends to be characteristic of more commercial impersonal seller/buyer relationships and drug market contexts. Additionally, the importance of buyer preferences – in the form of greater platform convenience – tends to increase in contexts where there is an established personal relationship with the seller. In contexts of social supply, it may be the seller who meets the buyer on *their* terms. As such, this paper provides an important contextualisation of how social supply behaviours are channelled through social media and messaging apps.

Social media and encrypted messaging apps are increasingly seen as more convenient, faster, and user-friendly local alternatives to purchasing drugs compared to the complexity and volatility of darknet drug markets (EMCDDA, 2019; Groshkova et al., 2022). However, these social media platforms and encrypted messaging apps are not purposely designed to facilitate drug trading. This distinguishes ad hoc social media drug markets from specifically designed darknet markets (Aldridge & Décary-Hétu, 2014), online pharmacies (Scammell & Bo, 2016), and other surface web drug purchasing websites (Childs et al., 2021). As such, it is important to consider how preconceived perceptions of different platforms and established patterns of social media engagement may influence how people adapt this technology for drug trading. Researchers have highlighted the importance of platform popularity and familiarity to the overall convenience of accessing drugs via social media (Bakken & Demant, 2019; Moyle et al., 2019). However, our findings highlight that platform popularity is one element of a broader set of local and culturally distinct patterns of social media engagement and distinctions between platforms, which people may use to structure their use of social media for drug trading.

In a polymedia environment the process of negotiating 'choice' of platform *"often becomes the message itself"* (Madianou & Miller, 2012b, pp. 172-173). This statement underscores the contrast between navigating platform 'choice' in more commercial drug market settings compared to social supply contexts. The *lack* of negotiation around platform 'choice' in commercial settings and sellers' ability to prioritise platform security features over considerations of convenience is contrasted with what can be considerable the complexities of balancing these factors between friends or within social networks.

From a drug market perspective, low transaction risks and the normalization of recreational drug use (Coomber et al., 2016; Potter, 2009) are likely to influence how important or explicit the consideration of platform 'choice' is to sellers in this setting. Researchers argue that many people "drift" into social supply behaviours as part of recreational drug use (Taylor & Potter, 2013). As such, contemporary social supply is likely to entail a "drift" into using "taken for granted" messaging apps (Ling, 2012) to organise trades, limiting any explicit platform 'choice' on the part of the seller. How buyers approach social suppliers will in large part depend on the platforms they are already connected on. As a result, the social media environment presents buyers and sellers in social supply contexts with the challenge of navigating how drug trading should be positioned within existing polymedia repertoires already established as part of their relationship or social group (Madianou & Miller, 2012b). This contrasts with the more 'traditional' use of the mobile phone in drug markets and sourcing between friends, where organising a drug transaction is a matter or 'choosing' whether to call or send a text (Moore, 2006; Søgaard et al., 2019). In social supply contexts a balance may need to be struck between providing the seller with some security, whilst also limiting inconvenience for the buyer.

Additionally, the inclusion of "taken for granted" platforms like Messenger as part of existing polymedia repertoires in social supply contexts carries considerable weight in shaping how hard sellers may need to work to move buyers to more secure platforms for drug trading. The pressure to be available via Messenger in New Zealand, particularly in relation to one's social group is considerable (Ling, 2017; Ling & Lai, 2016). In a friendship context, shifting away from the dominant 'default' messaging platform such as Messenger means inconveniencing your social group (Ling, 2017). Messenger becomes a bulwark which can make it particularly difficult for sellers to make use of 'high security' messaging options like Wickr. As such, sellers in social supply contexts could face 'soft coercion' to locate themselves on platforms already in use among their social groups (Ling, 2016, 2017), which could constrain their ability to navigate their local polymedia environments for drug selling purposes (Madianou & Miller, 2012b).

Our findings also offer contextualization of how encrypted messaging apps are used by buyers and sellers in smaller, local retail-level drug markets. Existing research has highlighted the popularity of encrypted messaging apps among darknet vendors for purposes of 'direct dealing' (Childs et al., 2020). Their use among commercial sellers on social media and other surface web drug markets has been documented (e.g., Blankers et al., 2021; Childs et al., 2021). However, our interviewees often separated their use of these platforms for drugs from their use of more mainstream social media channels. Though encrypted messaging apps are increasing in popularity, public perceptions of end-to-end encryption and secure messaging platforms like Signal or Telegram as catering to 'people with something to hide' remain influential (Akgul et al., 2021; Belair-Gagnon et al., 2018; Gaw et al., 2006). These perceptions impact on how these platforms are adopted for drug trading helping to justify their use in commercial drug market contexts, while elevating barriers to adopting them for drug trades between friends. Indeed, for many interviewees, encrypted apps appeared to signal the boundaries between social supply and their local commercial drug market.

From this perspective, the popularity of low security, high convenience social media platforms such as Snapchat or Messenger for drug trading, particularly among young people, may reflect some resistance to entering more commercial drug market structures, which researchers have suggested is a key function of social supply behaviours (Coomber & Turnbull, 2007). Researchers highlight that social media may make commercial drug markets more accessible to young people (Demant & Bakken, 2019; Moyle et al., 2019; van der Sanden et al., 2021). Though this is likely one impact of social media drug trading, it may be that using different social media and messaging platforms presents young people with a pathway through which they can manage their own engagement with and exposure to their local drug markets. Indeed, our findings show that 'choosing' to use or not use a particular platform for drug trading is one way this can be achieved.

It is notable that ten of our sample identified as female (n=10, N=33) particularly as research samples of people who use,buy and sell drugs are often overwhelmingly male. Studies have shown gender is a factor in drug use patterns (e.g., Van Havere et al., 2009), as well as people's experiences of buying and selling drugs (e.g., Denton & O'Malley, 1999). Additionally, research has also found gender differences in patterns of social media usage and engagement (e.g., Boyd, 2007; Hargittai, 2007). Consequently, a fruitful future direction for researchers could be to examine the role gender plays in shaping how or whether social media is used for drug trading.

Limitations

Our choice of Wickr as the platform for the interviewing of our participants is likely to impact on who we interviewed and our findings. Wickr was the encrypted messaging platform our participants most often reported using, and this may in part reflect the fact that many were already using Wickr (as opposed to having to download it specifically to take part in this research).

Platforms such as Tinder, Grindr, and Whatsapp, which are commonly used in New Zealand and in other parts of the world, both for drug trading and as part of people's daily lives, did not feature heavily in our sample, and future research could explore the issues we have covered among users of these platforms.

Finally, this study contains a large group of buyers, which may influence our findings around platform 'choice'. Some of the information on the scale of seller operations was provided by buyers whose understanding may be based on incomplete knowledge.

Conclusion

Using social media and encrypted messaging platforms for drug trading requires buyers and sellers to make 'choices' about which platforms they will choose to transact on. This paper has explored the ways in which buyers and sellers navigate platform 'choice' in relation to drug trading, highlighting the importance of drug market context in shaping how these 'choices' are made. We found that the nature of the relationship between the buyer and seller mediated perceptions of the importance of platform security and convenience, influencing judgments around which platforms were either 'appropriate' or 'inappropriate' for use in a particular drug market context. Sellers in more commercial market contexts could exercise considerable 'control' by directing buyers to specific platforms. Conversely, sellers in social supply contexts had to find a balance between their own security needs and established patterns of social media use among their social networks, often prioritising the use of socially embedded platforms such as Facebook Messenger. Our paper suggests social media drug markets are shaped by many of the same patterns and dynamics that influence the use of social media more generally. Studying social media drug markets requires researchers to look beyond drug market dynamics alone to consider how different social media platforms are perceived and navigated as part of people's daily lives.

Ethics approval

The authors declare that they have obtained ethics approval from an appropriately constituted ethics committee/institutional review board where the research entailed animal or human participation.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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